



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,987	01/30/2001	Kon-Hee Lee	1081.39545X00	8457

20457 7590 03/16/2004

ANTONELLI, TERRY, STOUT & KRAUS, LLP  
1300 NORTH SEVENTEENTH STREET  
SUITE 1800  
ARLINGTON, VA 22209-9889

EXAMINER

NGUYEN, LEE

ART UNIT	PAPER NUMBER
----------	--------------

2682

DATE MAILED: 03/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/771,987

Applicant(s)

LEE ET AL.

Examiner

LEE NGUYEN

Art Unit

2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 3 and 4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3 and 4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 29 December 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

This action is responsive to the communication filed 12/29/2003.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Henke et al. (US 4,484,355) in view of Atkinson (US 5,701,598) and Vignali et al. (US 5,327,580).

Regarding claim 3, Henke teaches a wireless communication system wireless communication methods and system for automatically setting a frequency channel and a tone squelch (fig. 1), comprising: an antenna 12; an antenna switch 14; an amplifier 16 for amplifying a necessary band frequency from a receive information signal induced by an antenna 12 passing a switch 14; a mixer 20 for mixing the band frequency with a phase synchronizing signal from a local oscillator portion 18; a demodulator 22 for demodulating a signal from the mixer; a receive tone squelch circuit 38 coupled to the demodulated signal (see 24) and to a transmit signal (see also 24) which generates a sound signal at the speaker 28 or combines the transmit signal with a tone squelch signal provided by the tone squelch circuit for providing a transmission of the transmitted signal (col. 5, lines 55-65); a transmit modulator 18 (col. 5, line 62) for combining a transmit signal input 30 with a transmit tone squelch frequency from a transmit tone squelch circuit 24 and modulating the combined signal (col. 5, lines 56-65); a controller 52 coupled to the code input (see CHANNEL SELECT switch

62, col. 6, line 25) for converting a code inputted into a code inputting portion into a frequency and tone squelch code (col. 13, line 25 through col. 15, line 1); a memory 54 for storing data, which is coded corresponding to frequency channel data and tone squelch code selected by the controller (col. 15, lines 26-50 and col. 2, lines 43-65). Henke only differs from the claimed invention in that a filter is used for receiving only desired frequency band and a display for displaying the frequency set by the controller.

However, the conventional use of bandpass filter at a receiver is conventionally well known, as taught by Atkinson in figure 5, numeral 65. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the filter of Atkinson to the system of Henke in order to filtering unnecessary frequency band. Henke as modified by Atkinson also teaches displaying a code or frequency inputted (col. 6, lines 30-55 of Atkinson). Henke as modified also fails to teach using duplexer rather a switch at the antenna between the transmitter and receiver.

According to Vignali, full duplex or half duplex can be used to transmit and receive signals at different frequency (col. 2, line 59 through col. 3, line 4). It would have been obvious to one of ordinary skill in the art at the time the

invention was made to provide duplex of Vignali to the system of Henke in order to enhance communication capability compared to the simplex mode.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Henke et al. (US 4,484,355) in view of Vignali et al. (US 5,327,580).

Regarding claim 4, Henke teaches a wireless communication method for automatically setting a frequency channel and tone squelch frequency for transmission of modulated information, comprising the steps of: storing a frequency channel code and a modulating frequency converting code at a memory (col. 2, lines 56-58); inputting data corresponding to a specified frequency code and a specified tone squelch frequency code during a waiting mode of a system; converting the wireless system into a transmit mode of operation after the inputting data (col. 13, line 25 through col. 15, line 1); using the data to set the frequency code and a tone squelch frequency code after converting the wireless system into the transmit mode (col. 15, line 26 through col. 16, line 7); selecting the channel frequency and a modulation frequency used during the transmit mode to transmit the modulated information according to the frequency channel code and the tone squelch frequency code and transmit the modulated information

according to the modulating frequency from the modulator through an antenna switch (col. 2, lines 61-68. Henke as modified also fails to teach using duplexer rather a switch at the antenna between the transmitter and receiver. According to Vignali, full duplex or half duplex can be used to transmit and receive signals at different frequency (col. 2, line 59 through col. 3, line 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide duplex of Vignali to the system of Henke in order to enhance communication capability compared to the simplex mode.

### ***Response to Arguments***

5. Applicant's arguments filed 12/29/2003 have been fully considered but they are not persuasive.

In the remarks, Applicant argues that Henke et al. do not automatically generate channel frequencies and tone squelch frequencies under the control of a controller which is associated with a code input in which the controller converts codes input from the code input into a channel frequency code corresponding to a transmit frequency and into a tone squelch frequency code corresponding to a tone squelch frequency.

In response, the examiner respectfully disagrees. In Henke, when the CHANNEL SELECT (corresponding to the claimed code input) is pressed, switch 62 commands the controller to read out or convert the values outputted from the PROM 54 into a corresponding transmitted frequency channels 0-9 (col. 13, lines 25-61). Similarly, when the CHANNEL SELECT is pressed, a particular CTCSS tone frequency is selected from the PROM 54 for transmission (col. 15, lines 26-29 and col. 14, lines 47-63).

Therefore, Henke does teach the claimed limitation.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory



period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEE NGUYEN whose telephone number is (703)-308-5249. The examiner can normally be reached on 8:00 AM - 4:30 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, VIVIAN CHIN can be reached on (703) 308-6739. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LEE NGUYEN

Application/Control Number: 09/771,987  
Art Unit: 2682

Page 9

  
Primary Examiner  
Art Unit 2682

3/9/04